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Khoyi et al.

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[54] MULTITASKING COMPUTER SYSTEM FOR INTEGRATING THE OPERATION OF DIFFERENT APPLICATION PROGRAMS WHICH MANIPULATE DATA OBJECTS OF DIFFERENT TYPES

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[\*] Notice: The portion of the term of this patent subsequent to Apr. 27, 2010 has been disclaimed.

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## Related U.S. Application Data

[63] Continuation of Ser. No. 938,928, Aug. 31, 1992, Pat. No. 5,226,161, which is a continuation of Ser. No. 681,435, Apr. 3, 1991, Pat. No. 5,206,951, which is a continuation of Ser. No. 88,622, Aug. 21, 1987, abandoned.

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[58] Field of Search 395/650, 800

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## [57] ABSTRACT

An object based data processing system including an extensible set of object types and a corresponding set of "object managers" wherein each object manager is a program for operating with the data stored in a corresponding type of object. The object managers in general support at least a standard set of operations. Any program can effect performance of these standard operations on objects of any type by making an "invocation" request. In response to an invocation request, object management services (which are available to all object managers) identifies and invokes an object manager that is suitable for performing the requested operation on the specified type of data. A mechanism is provided for linking data from one object into another object. A object catalog includes both information about objects and about links between objects. Data interchange services are provided for communicating data between objects of different types, using a set of standard data interchange formats. A matchmaker facility permits two processes that are to cooperate in a data interchange operation identify each other and to identify data formats they have in common. A facility is provided for managing shared data "resources". Customized versions of resources can be created and co-exist with standard resources. A resource retrieval function determines whether a customized or a standard resource is to be returned in response to each request for a resource.

51 Claims, 8 Drawing Sheets

